

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE APPLICATION OF: RICHARD M. LANGE AND LEONARD E. ORZECH

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EXAMINER: E. MCAVOY

FILED: DECEMBER 8, 2003

GROUP ART UNIT: 1764

TITLE: TRACTION FLUIDS BY COUPLING OF CYCLIC HYDROCARBON
MONOMERS WITH OLEFINS

Wickliffe, Ohio
Dated: July 27, 2007

Hon. Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97 (c)

The Examiner's attention is directed to the following additional item which may be relevant to the examination. The listing of any item herein is not intended as an admission that that item legally qualifies as "prior art."

U.S. Patent 4,424,400, Hentschel et al., January 3, 1984

FEE

Please charge the fee set forth in 37 CFR 1.17(p), believed to be \$180.00, to Deposit account 12-2275 (The Lubrizol Corporation).

I hereby certify that this correspondence is being filed electronically via the USPTO EFS with the Commissioner for Patents, United States Patent & Trademark Office, P.O. Box 1450, Alexandria, Virginia 22313-1450 on:

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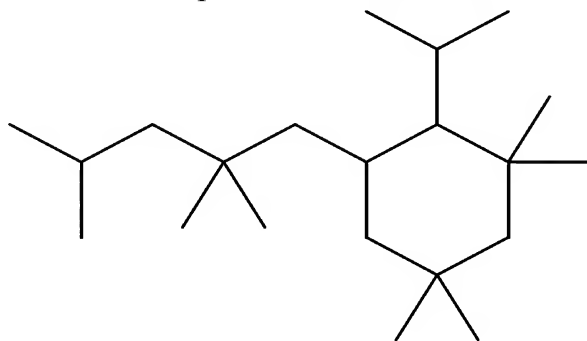
/Nancy S. Dedek /

Deposited by: Nancy S. Dedek

RESPONSE AND REQUEST FOR RECONSIDERATION

Applicants express their appreciation for the indication from the Examiner that claims 22-25 are allowed and that claim 26 would be allowable if rewritten in independent form.

The Examiner, however, now has indicated that claims 1, 3, 6, 9-21, and 27 are unpatentable over Bartley et al. (US 7,045,488). Bartley discloses certain cyclic oligomers, and the Examiner refers in particular to formula II of this reference:



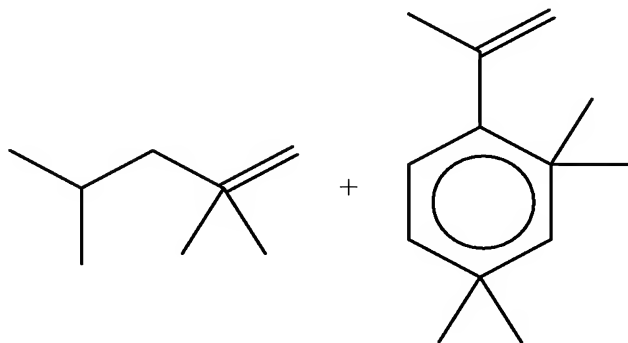
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which the Examiner considered to correspond to materials of the present claims when interpreted as 2 total units of (a) and (b) monomers.

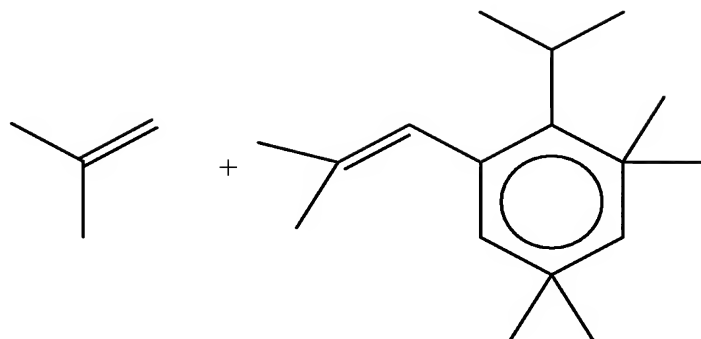
This interpretation is incorrect, as it is actually impossible to arrive at the above structure from dimerization or oligomerization of the presently required vinyl arene monomer and branched non-cyclic olefin monomer of at least 4 or 5 carbon atoms, for several fundamental structural reasons.

The above structure, from Bartley, has two instances of geminal di-methyl substitution on the ring. These structures cannot be obtained from a vinyl arene, because an aromatic ring can have at most a single substituent at any ring position.

Ignoring for the moment the impossible geminal ring substitutions, it appears that the addition reaction the Examiner envisioned would need to be between the following components:



or alternatively



The first proposed reaction, above, would require an olefin having yet another impossible pentavalent carbon atom, and the olefin would need to react with the arene by some hypothetical ring addition or substitution mechanism, rather than by the expected addition to the vinyl group. The second proposed reaction would involve the addition of propylene to a highly substituted internal double bond. In this instance (aside from the geminal substituent problem), the reacting olefin would be only a C3 olefin, rather than the presently required C4 or C5 olefin.

In short, the person skilled in the art would immediately recognize that structure II of Bartley simply cannot be prepared by from olefin and vinyl arene starting materials. The skilled person, absent prohibited hindsight, would not look to the structures of Bartley and receive any motivation to prepare the materials of the present invention or insight that the different materials of the present invention would be useful as traction fluids. Accordingly, the dimers and oligomers claimed in the present invention are not made obvious by the disclosure of the fundamentally different materials of Bartley.

The newly provided document (Hentschel) is submitted because it was cited in the prosecution of the Bartley reference. The oligoisobutylcyclohexane prepared by Hentschel for use as a heat transfer medium or dielectric liquid are made by Friedel-Crafts alkylation rather than by an addition reaction to a vinyl group.

Conclusion.

For the foregoing reasons it is submitted that the present claims are unobvious and in condition for allowance. The foregoing remarks are believed to be a full and complete response to the outstanding office action. Therefore an early and favorable reconsideration is respectfully requested. If the Examiner believes that only minor issues remain to be resolved, a telephone call to the Undersigned is suggested.

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Any required fees or any deficiency or overpayment in fees should be charged or credited to deposit account 12-2275 (The Lubrizol Corporation).

Respectfully submitted,

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